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Tukhachevskii and AirLand Battle

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Abstract <p>The purpose of this research is to advocate the necessity of LATVIA's membership in NATO. A thorough historical overview of LATVIA and an assessment of potential threat is used to evaluate the viability of the membership of LATVIA in NATO. The paper appraises the Government priorities, economic situation, military forces, and Baltic regional cooperation in light of the LATVIA's candidacy for NATO Membership. Second, the paper considers current relations between LATVIA and Russia, including very complex Russian minority issue, and between LATVIA and NATO to reveal LATVIA's situation in 2000-2001. The analysis explores the current problems, and potential future problems. The main issues surrounding LATVIA's membership in NATO are the readiness of LATVIA to Joint NATO, the readiness of NATO to continue movement towards the East, and the possible scenarios of the reaction of Russia if the Baltic States should become full members of NATO. The main problem of the NATO's enlargement is how to enable the Baltic States to achieve security and at the same time avoid increased confrontation with Russia. Simply put: Will LATVIA's proposed membership into NATO have a stabilizing effect in the Baltic/Eastern European region or act as a provocation to Russian National Interests?</p>		
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<p>13. ABSTRACT (MAXIMUM 200 WORDS) THE PURPOSE OF THIS RESEARCH IS TO ADVOCATE THE NECESSITY OF LATVIA'S MEMBERSHIP IN NATO. A THOROUGH HISTORICAL OVERVIEW OF LATVIA AND AN ASSESSMENT OF POTENTIAL THREATS IS USED TO EVALUATE THE VIABILITY OF THE MEMBERSHIP OF LATVIA IN NATO. THE PAPER APPRAISES THE GOVERNMENT PRIORITIES, ECONOMIC SITUATION, MILITARY FORCES, AND BALTIC REGIONAL COOPERATION IN LIGHT OF THE LATVIA'S CANDIDACY FOR NATO MEMBERSHIP. SECOND, THE PAPER CONSIDERS CURRENT RELATIONS BETWEEN LATVIA AND RUSSIA, INCLUDING VERY COMPLEX RUSSIAN MINORITY ISSUE, AND BETWEEN LATVIA AND NATO TO REVEAL LATVIA'S SITUATION IN 2000-2001.</p> <p>THE ANALYSIS EXPLORES THE CURRENT PROBLEMS, AND POTENTIAL FUTURE PROBLEMS. THE MAIN ISSUES SURROUNDING LATVIA'S MEMBERSHIP IN NATO ARE THE READINESS OF LATVIA TO JOIN NATO, THE READINESS OF NATO TO CONTINUE MOVEMENT TOWARDS THE EAST, AND THE POSSIBLE SCENARIOS OF THE REACTION OF RUSSIA IF THE BALTIC STATES SHOULD BECOME FULL MEMBERS OF NATO.</p> <p>THE MAIN PROBLEM OF THE NATO'S ENLARGENMENT IS HOW TO ENABLE THE BALTIC STATES TO ACHIEVE SECURITY AND AT THE SAME TIME AVOID INCREASED CONFRONTATION WITH RUSSIA. SIMPLY PUT: WILL LATVIA'S PROPOSED MEMBERSHIP INTO NATO HAVE A STABILIZING EFFECT IN THE BALTIC/EASTERN EUROPEAN REGION OR ACT AS A PROVOCATION TO RUSSIAN NATIONAL INTERESTS?</p>			
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EXECUTIVE SUMMARY

Title: **Tukhachevskii and AirLand Battle**

Author: Major David P. Casey

Thesis:

This paper will examine the evolution of the United States Army's AirLand battle doctrine as it directly relates to Tukhachevskii's Deep battle. From the examination of that evolution, the paper will identify and apply the broad factors that shaped AirLand doctrine. The reason this subject is timely and important is that it illuminates some of the challenges the armed forces, in particular the United States Army, face during the information era and a period of time when the United States is without peer.

Discussion:

Chapter One describes the environment of the Soviet Union when Tukhachevskii's Deep Battle originated. Additional prominent Soviet military theorists of the time are also introduced, creating a framework for their contributions. In Chapter Two Tukhachevskii's deep battle theory is examined, illuminating the additional contributions to Marshal Triandafillov and G.S. Isserson. The analysis concludes with the development of five elements existing at the operational level of war, found in Tukhachevskii's Deep Battle theory. These elements are used throughout the rest of the paper as a measuring instrument for examining the Army's AirLand Battle doctrine.

Chapter Three describes the evolution of the Army's AirLand Battle doctrine, not only by describing the factors that shaped it, but also examining the development relative to Tukhachevskii's Deep Battle. The conclusion compares the development of deep battle and AirLand Battle in an attempt to identify critical factors that form military doctrine. Those factors are then applied to the modern U.S. Army, in an attempt to describe the course of development for future doctrine.

Conclusion(s) or Recommendation(s):

The current political environment in the United States does not support the development of doctrine, as it did in 1982. The advent of the information age coupled with a period of time when the United States is the sole super power has a direct impact on military operations. This impact on the military may cause future doctrine to loosen its roots in the timeless principles of the operational art of war.

Introduction

World War I, revealed the lethality of new weapons such as the tank, airplane, and gas munitions; making static attrition warfare a very costly endeavor for both the attacker and defender. Entrenched infantry were supported by large numbers of field artillery and crew serve automatic weapons, rendering the cavalry obsolete. Increased mobility of the defender, because of railroads used along interior lines, made attempts to achieve flanking movements fruitless. The World War I battlefield became an entangled, cumbersome, gruesome, siege marred with little hope of a swift, decisive outcome and high personnel attrition. From the bleak backdrop of World War I, emerged a few great military thinkers attempting to break the paradigm of attrition warfare and define a new road to victory.

The period from 1918 to 1941 encompasses a time of revolutionary military theory and doctrine in both Germany and the Soviet Union. Products from their military intellectual capital were the German Blitzkrieg and Soviet Deep Battle doctrines. During 1941, Germany, utilizing Blitzkrieg tactics swiftly seized a majority of the European continent and validated their warfighting concept. Conversely, during 1941 the Soviet military did not have the leadership, materials, or training to achieve the precepts of their warfighting doctrine. Consequently, Soviet Deep Battle theory was cast aside by the

Soviets, for more feasible doctrine, leaving it to fade into relative obscurity.

In 1970, the Soviet Union resurrected their Deep Battle concept to answer the dilemmas of theater defense and offensive operations in Europe. In 1973, the United States Army returned its focus from Vietnam to Eastern Europe, found a swiftly modernizing Warsaw Pact, leading in both doctrine and military modernization. The US Army immediately sought out a doctrine to facilitate the defeat of the Warsaw Pact and modernize the Army.

This paper will examine the evolution of the United States Army's AirLand battle doctrine as it directly relates to Tukhachevskii's Deep battle. From the examination of that evolution, the paper will identify and apply the broad factors that shaped AirLand doctrine. This subject is timely and important because it illuminates some of the challenges the armed forces, in particular the United States Army, faces during the information era when the United States is without a peer competitor. A dangerous time when dynamics that formerly shaped the course of Army doctrine to embrace the operational art of war, may no longer be effective. If so, a base line must be established during these rapidly changing times that harbors these rudimentary principles of Army doctrine. Acting as an anchor in a violent sea, these principles or tenets must not be

lost, or Army doctrine in the form of FM 100-5 Operations will
cease to serve the United States Army effectively.

Chapter 1

In 1918 the Soviet Union, emerged from World War I gripped in a Bolshevik revolution and Civil War. Leon Trotsky, then commissar for military and naval affairs and General Mikhail V. Funze, Chief of the Red Army General Staff understood the desperate need for the Soviet military to modernize. The reformation of the Soviet military required both the acquisition of modern technology and a new doctrinal framework. Both Trotsky and Funze advocated the linkage between mobilization and reconstruction under one unified doctrine. The government supported the push for military modernization; however, available resources and industrial infrastructure were very limited.

The year, 1920 marked a period of a military intellectual renaissance in the Soviet Union. A. A. Svechin a Soviet general and military theorist, in his book Strategy, defined the term "Operational Art," and begins to view wars as a series of successive engagements rather than one decisive battle. The enemy's strength was no longer seen purely as the tactical formations on the perimeter, but was viewed to include all of the units and agencies that support the front line like the reserves, artillery, logistical units, and command and control. Viewing the battlefield in this perspective of depth, Svechin

sought to use the expanse of Soviet territory to its best advantage. This was also the first attempt to define the linkage between the strategic and tactical levels of war. Svechin's thoughts on the application of forces at the operational level of war were primarily defensive in nature. He felt the best Soviet strategy for the times should defend the homeland, utilizing Russia's vast area to overextend the enemy force. By fighting a series of delaying actions, the enemy would become extended and vulnerable to a decisive counter attack. The vast landmass of the Soviet Union was ideally suited for a defense in depth.

M.V. Funze, once appointed the Defense Commissar, sought to modernize the Soviet military based on doctrine that was offensive in nature and effectively utilized the advancements in armor and aviation. M. Tukhachevskii, V.K. Triandafillov, and G.S. Isserson developed concepts and doctrine that supported offensive mechanized and armor attacks deep into enemy formations. Deep Battle theory was adopted as Soviet doctrine in 1936 and Tukhachevskii and Triandafillov co-authored the Soviet Field Regulations PU-36. Because Triandafillov died of natural causes and both Svechin and Tukhachevskii were assassinated prior to the start of World War II, G.S. Isserson survived to continue to champion the doctrine; the focus of the paper is on Tukhachevskii's contributions.

Chapter 2

V.K. Triandafillov in his book the "The Nature of the Operations of Modern Armies," emphasized the dimensions of frontages and force requirements to conduct penetration tactics. The development of his points illuminated some critical factors that led to the refined creation of deep battle strategy: 1) The nature of future forces, 2) the relationship between the tactical front and the operational maneuver element, 3) the duration and depth of operations, and 4) the attack frontage, will all be examined in greater detail.

The genius of Marshal Tukhachevskii's "Deep Battle, " theory in collaboration with Marshal Triandafillov is concentrated in the use of operational maneuver to seize the offensive initiative from the enemy and maintain it over time and space towards the enemy's defeat. Deep battle entails the understanding that an enemy's combat power resided throughout the depth of his defensive operations and not in the strength of the tactical perimeter. This concept led to the development of tactics to penetrate the enemy's tactical defense and defeat his rear echelons (Figure 1.)ⁱ. "Battle will bring about: (a) the annihilation of the enemy's human and material resources (b) the breaking of his morale and ability to resist."ⁱⁱ The effect of the deep attacks created operation shock *udar* upon the leadership, and supporting forces, causing the tactical units to

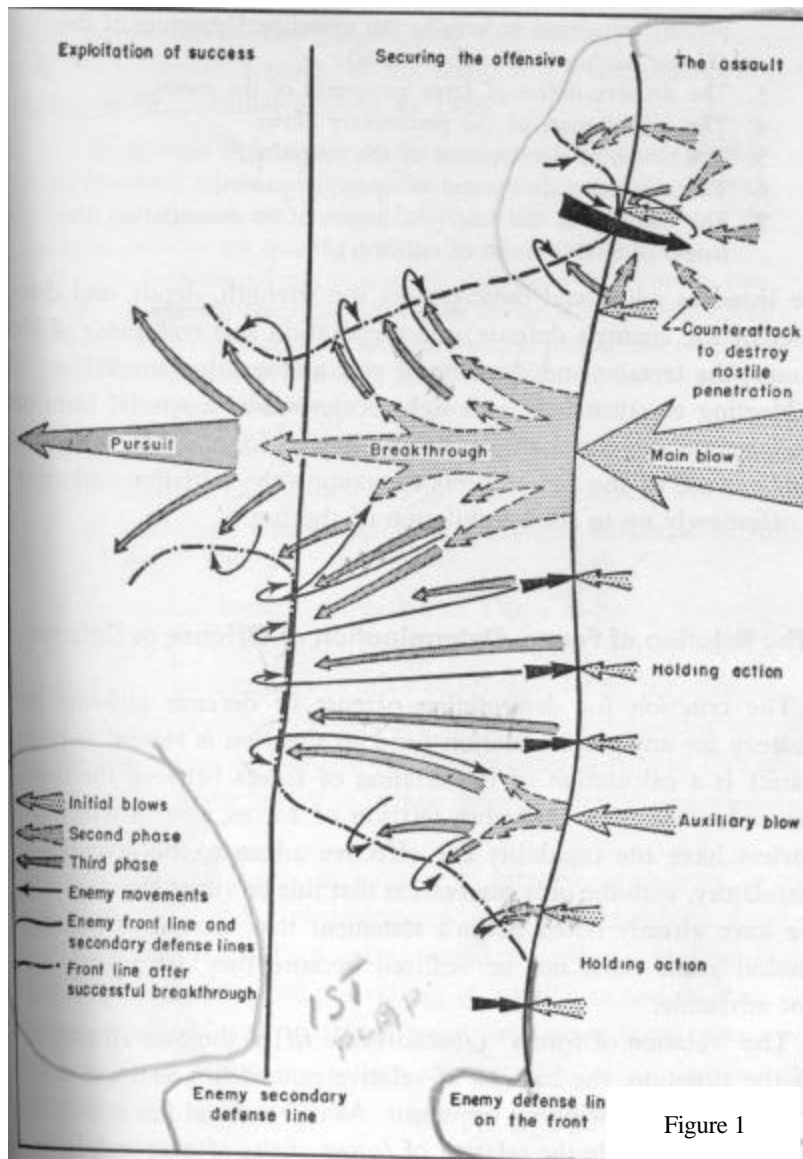


Figure 1

resign even after minimal reduction of materials. Tukhachevskii and Triandafillov brought deep battle theory to the forefront of Soviet doctrine by authoring the Soviet Field Service Regulations PU-36.

The conventional wisdom of the time viewed battles as engagements between armies arrayed in

linear frontages focused on positional warfare. The object was to defeat the enemy formation either through shear force of attrition or by maneuver to an assailable flank. The modernization of weapons such as artillery and machine guns, gave a definitive advantage to the defender in this form of battle; where the attacker was forced to assault through an unrelentless storm of direct and indirect fires. Tukhachevskii's

deep battle concept broke the linear defense and returned the initiative to the offense.

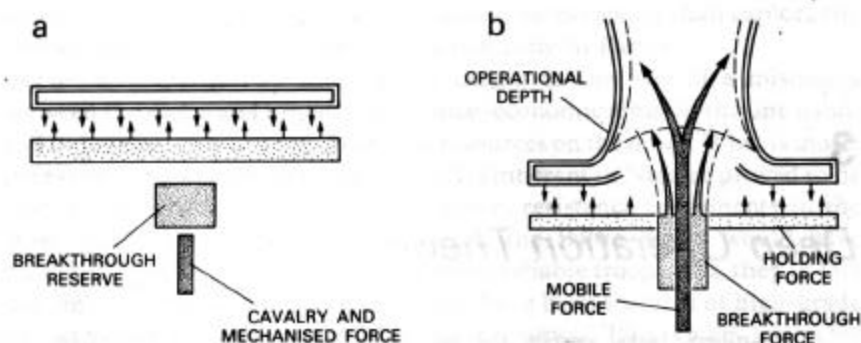


Figure 2

Deep battle penetration tactics required the first echelon comprised primarily of infantry, directly supported by tanks and artillery, to achieve maximum contact with the enemy frontage (Figure 2a.)ⁱⁱⁱ. The first echelon violently engaged and fixed the enemy in position, preventing him from reacting to the second echelon's attack. The second echelon comprised mainly of tanks, attacked along a relatively narrow frontage to overwhelm the enemy defense, creating a breakthrough or penetration in the enemy frontage (Figure 2b.)^{iv}. The exploitation or pursuit force swiftly passed through the breach in the enemy defense and assaulted the rear echelons. The combined arms team of tanks, aviation, and artillery suppressed and interdicted the enemy throughout the depth of the defense, further reducing the enemy's ability to react. The combined effects of the penetration and the pressure asserted by the holding force in

conjunction with fires collapsed the enemy defense operationally and psychologically.

Tukhachevskii understood the relationship between the positional warfare and maneuver warfare and did not attempt to completely depart from either. In order to penetrate into the depth of enemy rear areas a holding force was required to fix the enemy units and prevent them from interdicting the mobile or pursuit force. A robust holding force with the legitimate capability of defeating the opposing force was required to apply pressure on the defenders; while the maneuver force gained physical speed and mental agility over the enemy.

Triandafillov struck a balance between the calculated elements of operations and the commander's intuitive vision of the battle. He stated, "Operational art not only should, but can give way to certain calculated foundation."^v Triandafillov described the physical dynamics involved in such an operation through time and space. The density and size of the enemy frontage, the depth of the enemy defense, the frontage of the friendly penetration force, and the desired depth of the breakthrough all required careful consideration. These considerations directly affected placement and distribution of infantry forces, artillery, armor, and logistical trains.^{vi} These calculations were critical in planning an operation of such size and immense support requirements.

Additionally commanders needed to visualize the entire operation from beginning to end, not just the first engagement. By nature of the operation, the exploitation force's last battle was always more difficult than the first, requiring the commander to retain combat power to win the final battle. "In mounting a penetration operation, the transition from breaking-in battle to turning movement must be carefully thought out and adequately planned. These offensive phases must follow one another without any gap in time, letup in intensity, or hiatus in communications and re-supply." G.S. Isserson further echo this by saying "future war deep operations will appear not as a single links of a series of interrupted engagements, but as an unbroken chain extended for the entire depth of military activities."^{vii}

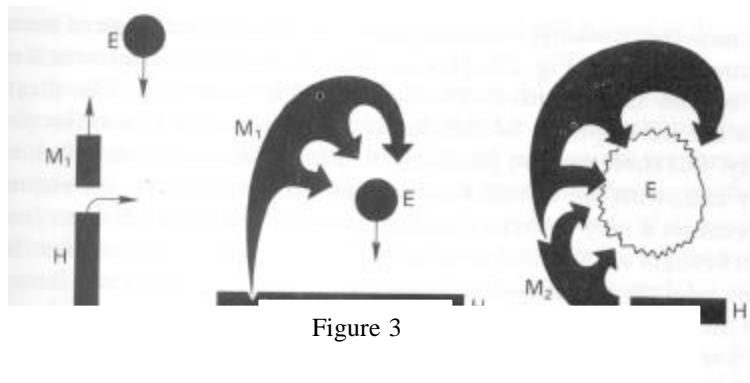
The principle of simultaneity, defined as attacking the enemy defense in depth at the same time, required heavy artillery and aviation support. By attacking the enemy throughout the depth of the defense, maximum contact was achieved, disrupting the enemy commander's ability to react to any one action on the battlefield. Air interdiction and neutralization of deep targets directly supported the maneuver of the exploitation force and complemented the attempt to deny the enemy's ability to respond. The synergy achieved by air and

deep maneuver increased the speed of attack, rapidly collapsing the enemy's defense.

Mounted combat resources allow the attack to be mounted in such a way as to strike the enemy simultaneously over his whole depth and to delay the movement of his reserves to the threaten sector. In 1934 Tukhachevskii stated "We now have at our disposal resources like aviation...which can make these deep sallies(raids). In this way the enemy should be pinned down over the entire depth of his dispositions, encircled and destroyed."^{viii}

The relationship of operational ground maneuver and fires drove Tukhachevskii to the concept of "interchangeability of shell with the bayonet and bullet." Tukhachevskii's focus upon and understanding of how technology would increase the depth of operations provided the foundation. The capabilities of command and control, maneuver, and fires were increasing rapidly as technology continued to progress. Each new development added depth and speed to the battlefield. Tukhachevskii understood the great potential of chemical munitions and the capabilities of attack aviation and airborne forces operating deep in the enemy rear. Technological advancements made each new system reach deeper into the enemy defense, with greater lethality. Tukhachevskii even sought to develop, light, mechanized airborne forces and tanks that would create panic and devastation by their sudden appearance in the enemy's rear areas. This mobile light armored force in the enemy rear area, would create a turning movement, or require the enemy to thin the front lines to retain combat forces to react to the airborne insertion. Clearly the platform with the greatest deep operational

potential was aviation. The PU-36 detailed a litany of aviation responsibilities in the deep battle, requirements synonymous to modern military aviation. (see App (A)) The aviation element created additional depth to the attack and produced tempo favorable for the ground forces. Air attack combined with airborne units, artillery and armored penetrations created significant operational shock. The attack interdicted enemy units and disrupted command and control on all levels.



Triandafillov's battlefield analysis led to the proper force ratios of the first and second echelons. The exploitation force

required the force, mass, range, and mobility to defeat the enemy's counter attack force, and all other units in the rear echelons. The deepest penetration remained between 35 and 50 kilometers and in the pursuit 40 kilometers a day was achievable. The key to maneuver in PU-36 is speed:

Speed of action in conjunction with organization, expert maneuver and dexterous application to the terrain, with an account of the enemy's air, is a basic guarantee of success in battle. Troops having quickly executed a disposition, quickly regrouped with a changing sanitation, quickly arising from rest, quickly perfecting a campaign movement, quickly falling out in combat order and opening fire, having quickly attacked and pursued the opponent, can always count on success. (Figure 3.)^{ix}

Additionally Tukhachevskii stated, "The fundamental condition of successful maneuver is speed in movement." Once

operational maneuver was achieved Tukhachevskii understood the offensive initiative must not be surrendered. A loss of speed meant culmination and the possibility for the enemy to recover.

Speed is developed in the relation to the enemy; speed given a physical direction in relation to the enemy is velocity. The ability to achieve and maintain superior speed to that of enemy is an important element to Deep Battle theory. The holding force facilitates the mobile force's ability to create speed and maneuver faster than the enemy can react. Lieutenant General Zlobin of the Soviet Red Army wrote in 1945:

The employment of armored and mechanized troops, aircraft, artillery, and airborne forces has brought impetus, swiftness, an element of surprise and a striking force into the course of military operations, has also created preliminary conditions for an increase of the mobility of armies, at the same time considerably reducing the possibility of positional warfare. The operational possibilities of these new weapons increased the depth and range of operations, making it possible to split organizational structure of enemy along the front and depth into separate isolated pockets and destroy them one by one.^x

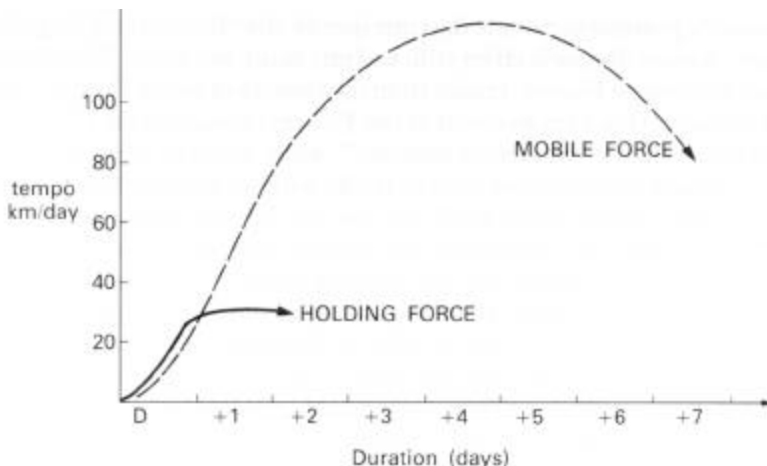


Figure 4

The relationship between maneuver and positional forces is complementary. Disrupting, fixing, and interdicting the enemy,

while retaining freedom of maneuver and superior mass to defeat isolated units in detail is essential to successful operations in the enemy rear areas. Richard Simpkin's graphical rendition of Tukhachevskii's encounter battle, further illustrates the relationship between positional and maneuver forces in gaining tempo over the enemy force (Figure 4.)^{xi}.

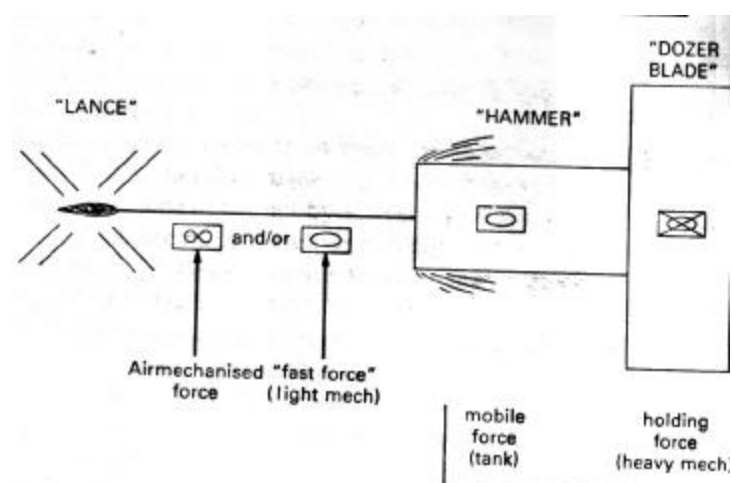


Figure 5

The mobile attack force became the fulcrum of deep battle theory in the offense and the defense. The unit was tasked to achieve operational shock over the enemy through maneuver, speed, and superior firepower at the point of attack. The requirements for speed, mobility, sustainability, flexibility, and lethality led to the focus on armor and aviation, to bring about an operational decision on the battlefield. The Soviets developed the operational maneuver group (OMG), which was based on an armored division with aviation brigade to penetrate into the enemy rear area and conduct attacks at medium depth. (Figure

5.)^{xii} The OMG constituted the second echelon exploitation force designed to conduct consecutive attacks in the enemy rear area culminating with the collapse of the enemy defense in depth. The focus on operational maneuver and firepower in lieu of tactical objectives such as terrain, marked a clear departure from World War I style doctrine. Deep battle sought to create the freedom of operational maneuver to seize and never surrender the offensive initiative, through continuous operations/attacks. Tukhachevskii stated:

One must remember that, even if he has only routed the enemy in the initial operation rather than destroy him; the attacker is in an extremely favorable position vis-à-vis the defended side. He has control of the situation, provided only that he denies the enemy freedom of action by continuous pursuit and that he maintains unrelenting pressure in striving for final destruction of all opposing forces.^{xiii}

Abstaining from follow-on operations until the enemy army is completely destroyed deprives the victor to continued control of the situation. A pause faces him with the need to fight a new battle, in which the chances of success are more or less equal for both sides.^{xiv}

Throughout the remainder of the paper we will focus on Tukhachevskii's Deep Battle theory's five elements: (1) Tactical units are an instrument to support operational maneuver, (2) The application of pressure across the maximum area denies the enemy's ability to maneuver in response to a penetration. This condition greatly enhances operational maneuver and secures the initiative, (3) The greater depth and speed that can be achieved by operational forces increases the lethality and shock to the enemy, (4) Both fire power and ground maneuver can be used interchangeably to increase depth as technology progresses, (5)

The depth of the battlefield must be viewed as one continuous operation to ensure the commander sees and plans for the final battle both in time and space as well as he plans for the first battle. In that way ensuring feasibility of continuous, consecutive operations to reach the final result.

ⁱ Raymond Garthoff. *Soviet Military Doctrine*. (Glencoe, Illinois: The Free Press, 1953), 71.

ⁱⁱ Richard Simpkin. *Deep Battle The Brainchild of Marshal Tukhachevskii*. (London: Brassey's Defense Publishers, 1987), 177.

ⁱⁱⁱ Richard Simpkin. *Race to the Swift Thoughts on Twenty-First Century Warfare*. (London: Brassey's Defense Publishers, 1985), 38.

^{iv} Richard Simpkin. *Race to the Swift Thoughts on Twenty-First Century Warfare*. (London: Brassey's Defense Publishers, 1985), 38.

^v Harold Orenstein. *The Evolution of Soviet Operational Art, 1927-1991*. (London: Frank Cass & Co Ltd, 1995), 310.

^{vi} Harold Orenstein. *The Evolution of Soviet Operational Art, 1927-1991*. (London: Frank Cass & Co Ltd, 1995), 310.

^{vii} G.S. Isserson. "The Evolution of the Operational Art," in *Voprosy strategii i operativnogo iskusstva v sovetskikh voennykh trudakh 1917-1940* Moscow:1965, 395

^{viii} Richard Simpkin. *Deep Battle The Brainchild of Marshal Tukhachevskii*. (London: Brassey's Defense Publishers, 1987), 170.

^{ix} Richard Simpkin. *Deep Battle The Brainchild of Marshal Tukhachevskii*. (London: Brassey's Defense Publishers, 1987), 63.

^x Raymond Garthoff. *Soviet Military Doctrine*. (Glencoe, Illinois: The Free Press, 1953), 89.

^{xi} Richard Simpkin. *Race to the Swift Thoughts on Twenty-First Century Warfare*. (London: Brassey's Defense Publishers, 1985), 105.

^{xii} Richard Simpkin. *Deep Battle The Brainchild of Marshal Tukhachevskii*. (London: Brassey's Defense Publishers, 1987), 74.

^{xiii} Richard Simpkin. *Deep Battle The Brainchild of Marshal Tukhachevskii*. (London: Brassey's Defense Publishers, 1987), 91.

^{xiv} Richard Simpkin. *Deep Battle The Brainchild of Marshal Tukhachevskii*. (London: Brassey's Defense Publishers, 1987), 92.

Chapter 3

As US military operations in The Republic of Vietnam came to a close in 1973, the US Army reoriented its focus upon Europe and the North Atlantic Treaty Organization (NATO). The US Army found a Warsaw Pact vigorously modernizing under a new doctrine. The new Soviet Combined Arms Concept (CAC) was characterized by three elements: (1) Overwhelming fire support to produce a shock effect, (2) Unceasing follow on echelons to capitalize on the shock attack, and (3) The breakthrough-penetration to achieve maneuver in the enemy rear area. The US Army returned from a very unpopular and unfavorable war sunk in the quagmire of poor morale, poor unit discipline, leeriness in the confidence of senior leadership, and well behind the Warsaw Pact in the quantity of military equipment and doctrine. In 1976 the Warsaw Pact enjoyed a 2.7 to 1 advantage in main battle tanks, 2.5 to 1 advantage in artillery and a 1.4 to 1 advantage in infantry fighting units over the NATO forces in central Europe.ⁱ One of the US Army's critical initiatives required the publishing of new doctrine to meet the threat from Eastern Europe they had neglected. This chapter will examine the evolution of Army doctrine, found in FM 100-5 Operations, spanning a ten-year period from 1976 to 1986. The conceptual basis for each doctrine will be described and critiqued.

In July of 1973, General William E. Depuy, the commander of the Training and Doctrine Command (TRADOC) embarked on the mission of establishing new Army doctrine. A conscientious student of the 1973 Arab-Israeli War, General Depuy sought to apply the lessons of increased weapons range, lethality, and accuracy in the new doctrine. These capabilities would be required to equalize the fight against a numerically superior opponent.

The document, *Operations*, FM 100-5, also known as the "Active Defense," was completed in 1976, and received with a hailstorm of criticism. Based on the tenets of defeating the enemy in the "first battle," the "Active Defense," was heavily dependent on the use of firepower for success. The Active Defense positioned forces forward in a linear yet mutually supporting array. Division sized units, not in contact moved along interior lines to blunt the enemy penetration. The lack of depth, maneuver, and the high concentration of firepower were reminiscent of the unsuccessful French Maginot line. Belief in the defense as a vastly superior form of battle to the offense, resulting from the lethality of new weapons on the battlefield, was not new. Trench warfare was adopted during World War I with similar assumptions. Operational maneuver vanished from the battlefield during World War I, only to be revived by the Germans in World War II with devastating effects. The authors

of Active Defense fell into the same paradigm that plagued the French in 1940 while poised against an enemy that practiced maneuver doctrine.

Active Defense's reliance on firepower as the primary element for tactical success, became extremely evident during computer generated wargames. Phases such as "fire power dominance", and "PK ratios (probability kill ratios)," became common language between players. Probability kill charts replaced the moral elements of surprise, shock, speed, and flanking fires on the enemy, creating a very rigid view of the battlefield, devoid of many very significant characteristics. Such characteristics could not be captured in the war-gaming model, so there was a tendency to dismiss their potential effects as being trivial.

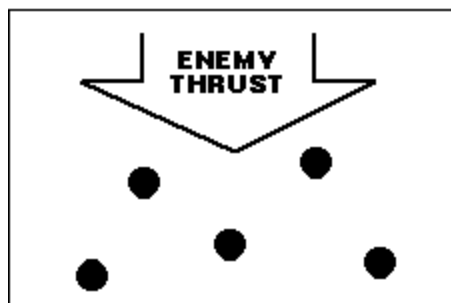


Figure 6

*The first diagram (Figure 6.) represents the basic defensive position, with mutual supporting positions and overlapping indirect fires. This placement of forces ensured the enemy could not swiftly penetrate the defensive line allowing time for reinforcements to arrive.*ⁱⁱ

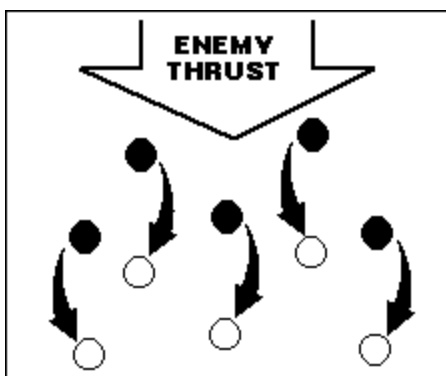
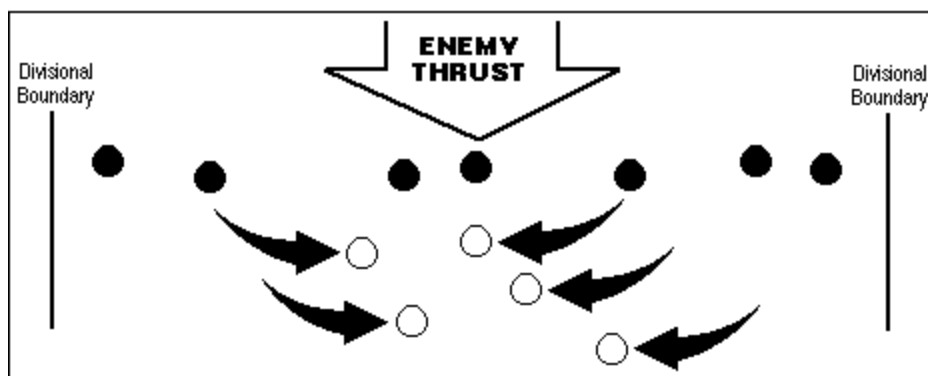


Figure 7

The second diagram (Figure 7.) illustrates a rolling defense designed to avoid the overrunning characteristics of the defender's through a series of well-timed withdrawals to prepared secondary defensive positions. The process is not intended to be a single-step; the withdrawals were to be carried out as many

times as necessary, preserving the defenders while inflicting sufficient attrition on the attackers to force the eventual cessation of the attack.ⁱⁱⁱ



The third diagram (Figure 8) illustrated the maneuver of the division to form the afore

mentioned defensive system, once the main avenue of attack is identified. The procedure is that reinforcing laterally with on-line battalions from the flanks as opposed to falling back on defense lines in the rear or placing primary reliance on reserves.^{iv}

Given the Soviet doctrine of the holding force achieving maximum contact with the enemy front line, to prevent reinforcement from enemy line units; it seems unlikely the mobility required (Figure 1.) could have been achieved. The Soviet emphasis on speed and the deployment of continuous echelons to retain pressure on the enemy, was designed to fix enemy units on the front lines. This tactic significantly reduced the likelihood that allied units in contact might displace and assume subsequent positions. The Active Defense's required choreography of movement lacked cohesion and speed under intense pressure, providing the enemy many possible opportunities to exploit vulnerabilities.

Though the "Active Defense" doctrine seemed to offer little attempt to wrestle the initiative from the enemy, the doctrine did create positive effects on the US Air Force. Active defense clearly stated, "The Army cannot win the land battle without the Air Force." Close air support and the destruction of enemy armor became the primary roles of the Air Force, with no requirements of deep independent attack. The Air Force responded positively to the close air support and interdiction missions by fielding the A-10 Thunderbolt, a dedicated armor killing platform. In the 1979, version of Air Force Manual 1-1 Functions and Basic Doctrine of the United States Air Force close air support and air interdiction are listed respectively as the 5th and 6th operational missions of the Air Force

As opposing surface forces move to engage in combat, the application of air interdiction resources becomes more sensitive to the surface commander's battle plans. That portion of the air interdiction mission which may have a direct or near term effect upon surface operations-referred to by the term "battlefield air interdiction"-requires the air and surface commanders to coordinate their respective operations to insure the most effective support of the combined arms team.^v

With regard to the five principles of Tukhachevskii's Deep Battle, "Active Defense" doctrine falls miserably short of the concept for the following reasons: (1) Tactical units were not instruments to achieve operational maneuver. Mobility was sought only to mass forces on the enemy's penetration/ strength to achieve a tactical victory (first battle). The Soviet CAC doctrine sought victory beyond the use of the first echelon, diminishing the requirement to win the first battle. This made

the allied "first battle" victory a tactical but not an operational defeat. "Active Battle," was void of operational maneuver.

(2) There is no discussion of simultaneous attack across the battlefield. The enemy was allowed to maneuver freely deep within his own battle space. Allied air focused on interdicting enemy forces close to the front line of troops (FLOT), to the enemy's second echelon. By primarily focusing in the first echelon allowed the enemy force to retain the initiative and dictate the battle by maneuvering forces on desired fronts.

(3) "Active Defense," did not achieve speed with relation to depth. Units moved swiftly to tactical points on the battlefield to conduct the "Central Battle." The lateral movement of forces to subsequent fighting positions provided little effective depth to the defense and achieved virtually no operational speed.

(4) Fire support primarily focused on the close battle.

(5) In the "Active Defense," the commander had a clear vision of how the fight and win the first battle, but not any subsequent engagements.

The "Active Defense" FM100-5 of 1976 was simply one hundred and eighty degrees away from Deep Battle or any other form of maneuver warfare. At best "Active Defense" was a dynamic World War I vintage linear defense, focused on attrition through

firepower. Designed to defeat the Soviet threat in Eastern Europe, "Active Defense" was not applicable to any other theaters of conflict. The doctrine's lack of offensive focus was indicative of the political environment of its time. The North Atlantic Treaty Organization (NATO) did not want to incite Soviet aggression by developing the perception of an offensive orientation.

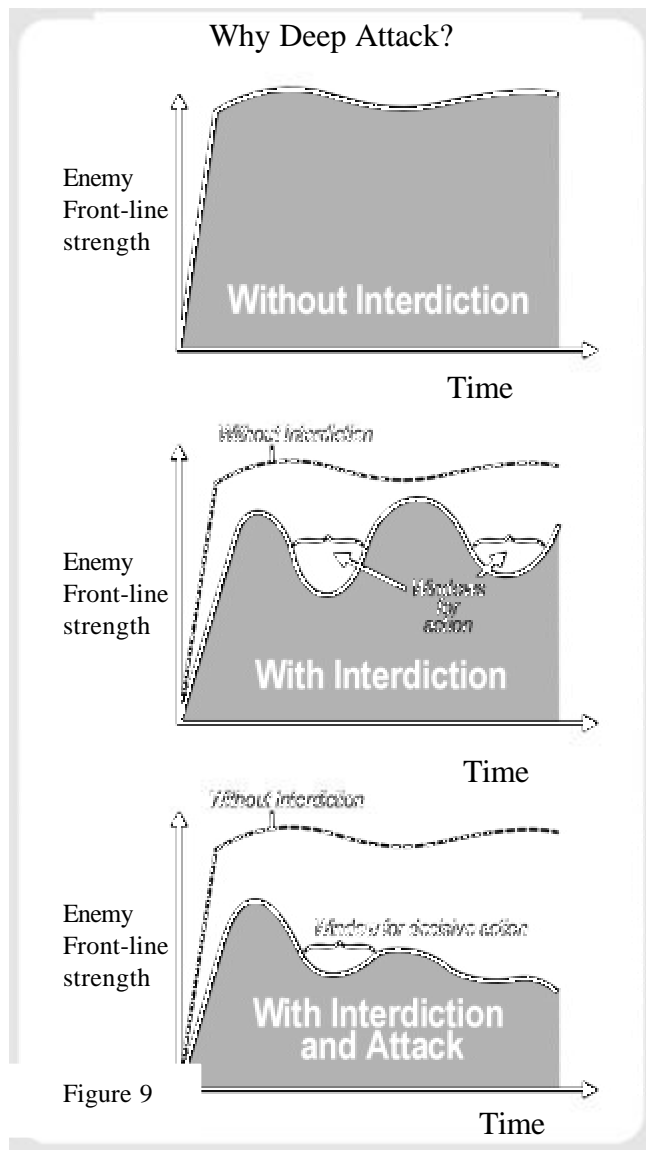
In July 1977, General Donn A. Starry replaced General Depuy as the head of TRADOC. Having commanded both at the Army Armored Center in Fort Knox Tennessee and V Corps in Europe, General Starry was very familiar with the emerging Soviet threat and the immense focus on the first battle. He conceptualized this battle as the Central Battle. The Central Battle was "The collision of battalions and brigades in a decisive battle, combining elements of air-land confrontation, firepower, maneuver, and support."^{vi} General Starry's Central Battle was characterized by the integration of all air and ground systems for the decisive outcome. A series of war games using battlefield calculus concluded that a "Central Battle" was not going to be successful against the Warsaw Pact's massive echelons.

In the battle calculus, measurable quantities were computed and analyzed in terms of minutes into the battle. Analytical categories included ratios of opposing forces by troop strength and weapon type, rate of enemy advance, indivisibilities across terrain, best ranges of fire by weapon type, comparative rates of fire, number and opportunities to fire, number of commander decisions, and time lengths to call for and receive attack helicopter support and Air Force close air support.^{vii}

Through the war gaming process, two basic assumptions remained constant throughout planning: That allies would be outnumbered, and the geography precluded use of depth in fighting a war in Western Europe. The shortcomings of the "Active Defense" were widely known. William S. Lind, and Colonel William Richarson USA, authored two of the five articles that appeared in the Military Review and Army Journal from 1977 to 1978. A professional consensus among senior Army leadership led to seeking a revision to the "Active Defense." Further analysis revealed the requirement for the reduction of enemy follow on echelons, in order to establish conditions to win the Central battle. Soviet doctrine was not developed requiring victory of the first echelon, but exploited weaknesses in the enemy lines; by mounting an overwhelming force in the second echelon. The concept of Force Generation was derived as a method of focusing resources to include sensors on the second echelon, allowing the division and corps commanders to both track and neutralize elements of the second echelon.

The resulting combination of the Central Battle and Force Generation concepts was the Battlefield Development Plan, published in November 1978. The Battlefield development plan caused commanders formerly focused on the decisive battle, to look deeper and attempt to create an environment for victory in

the close battle. The complementary nature of the concepts provided an opportunity for the division and corps commanders to wrestle the initiative from the enemy. Disrupting the enemy attack deeper in zone created opportunities for counter attacks, and lessened the pressure of the second echelon.



The adoption of the Battlefield Development plan illuminated numerous structural shortfalls at the division and corps levels. Neither unit contained the organic assets and command and control to observe and interdict the second echelon more than 20 km beyond the Forward Line of Troops (FLOT). In 1979, General Starry, understanding the desperate need to extend the operational reach at the division and corps levels, requested a study of the

heavy division's war fighting capabilities in the areas of war fighting functions and structure called Division 86. The

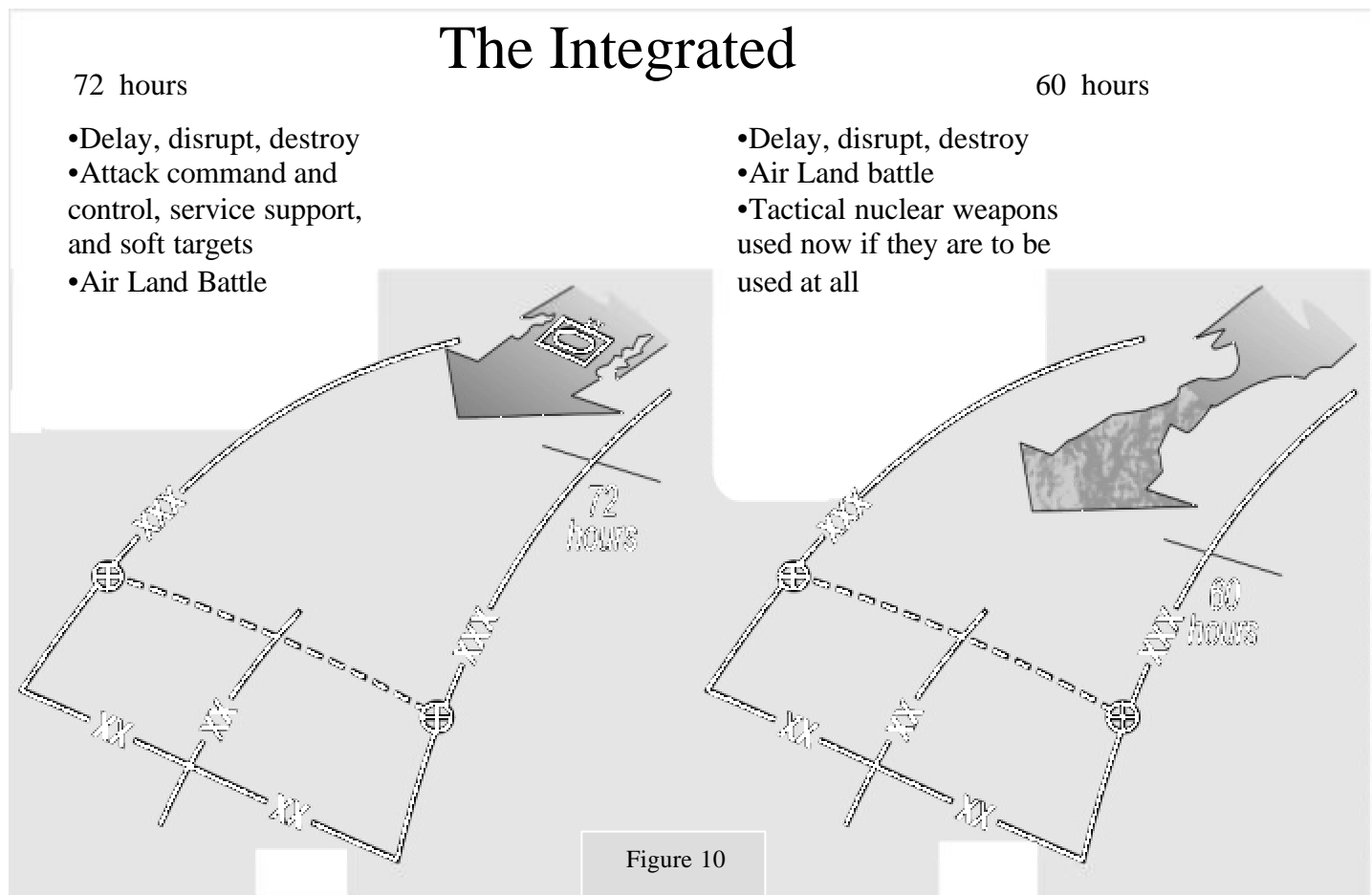
Division 86 study incorporated exhaustive war gaming and analysis by TRADOC and additional schools. The new Division 86 heavy division that emerged, whose structure survived into the 1980s Army, numbered approximately 20,000 men. There were 6 tank battalions and 4 mechanized infantry battalions in its armor version, 5 and 5 in its mechanized infantry form. The Division also received significant, new, deep interdiction component in the form of the air cavalry attack brigade, as well as expanding the division artillery from batteries of 6 to batteries of 8 howitzers. Division 86 departed from the World War II and ROAD triangular principle by strengthening each maneuver battalion from 3 line companies to 4 and added TOW missile companies among other changes."

General Starry in his 1981 article "Extending the Battlefield" emphasized the critical requirement for deep attacks, orchestrated primarily at the New Army Corps 86 level. Deep interdiction in the form of reduction of the enemy's second echelon forces was emphasized as the cornerstone of success (Figure 9.)^{viii}. Destroying and disrupting enemy forces in the deep battle developed suitable conditions and force ratios for the close battle. The unfortunate reality for the Army in 1980 was the inability to conduct deep interdiction with organic weapon systems. Corps commanders were required to influence the enemy 30 to 120 kilometers beyond their FLOT, relying heavily

upon Air Force to achieve favorable results. General Starry commented:

Breaking up the mass and slowing the momentum of second echelon forces is critical to the ground commander fighting the first echelon. The air commander must concentrate on this task, for the ground commander hasn't the organic resources either to find or to fire at the second echelon. Forces fighting the first echelon must have the additional target servicing of aerial firepower to win against a breakthrough.^{ix}

The memorandum of understanding "TAC-TRADOC Agreement on



Battlefield Air Interdiction,"^x signed on 4 April 1980, directly led to a general agreement in 1981 recognizing the Army Corps commander as the entity for prioritizing targets for battlefield interdiction.

In August 1982 the revision to FM 100-5 was approved and titled "AirLand Battle," representative of the air ground relationship. AirLand Battle turned emphasis away from the first battle to sustained operations designed to defeat an enemy force in a specified space and time with simultaneous and sequential battles.^{xi} Much like the trade winds hitting a sail, the operational level of war appeared in AirLand doctrine giving Army commanders offensive momentum, initiative, and a return to maneuver.

AirLand Battle doctrine ... is based on securing or retaining the initiative and exercising it aggressively to defeat the enemy. Destruction of the opposing force is achieved by throwing the enemy off balance with powerful initial blows from unexpected directions and then following up rapidly to prevent his recovery... Army units will... attack the enemy in depth with fire and maneuver and synchronize all efforts to attain the objective. They will maintain the agility necessary to shift forces and fires to the points of enemy weakness. Our operations must be rapid, unpredictable, violent, and disorienting to the enemy.^{xii}

The authors of AirLand Battle 82 further categorized deep attack objectives in four distinct forms. "The first, attack by fire, aimed to disrupt the enemy's rear echelon forces to hinder their reinforcement of the forward area. (Figure 10.)^{xiii} The second, a variation of the first, would use firepower to pin enemy troops in the rear areas, allowing U.S. forces to flank and defeat opposing forces in contact. Engagement of the second echelon with both maneuver forces and long-range fires to achieve the isolation of the enemy in the close-in battle described the third deep attack method (Figure 11.)^{xiv} The fourth envisioned selectively targeting specific enemy systems (such as

24

The Integrated

12

- Delay, disrupt, destroy
- Real time target acquisition
- Attacking force has few movement alternatives
- Tactical nuclear weapons used now if they are used at all
- Air Land Battle

- Delay, disrupt, destroy
- Defeat echelon in contact
- Chemical weapons used now
- Attack follow on forces
- Air Land Battle

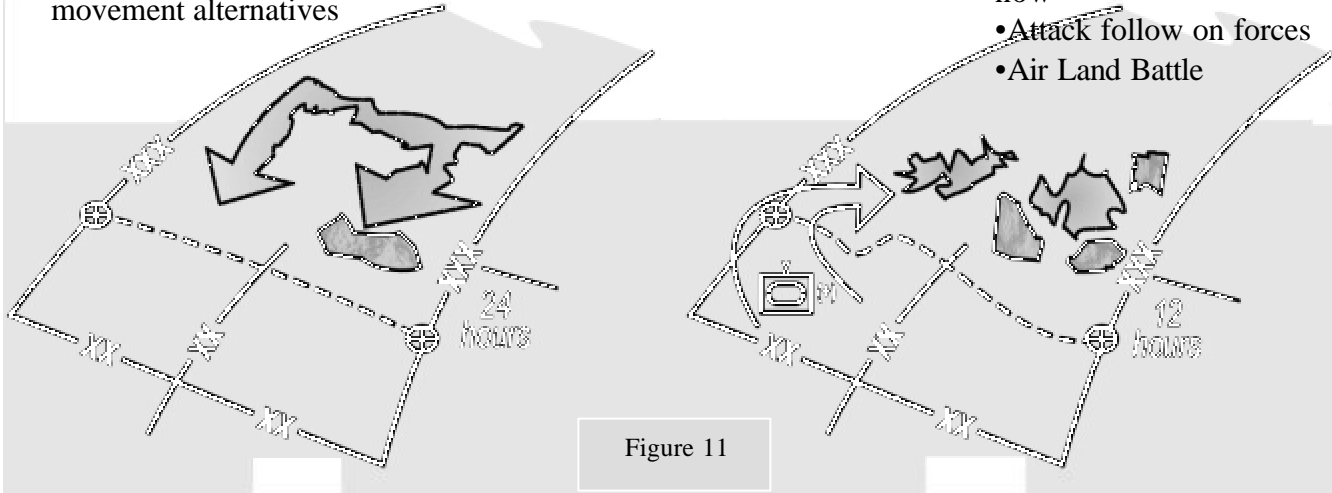


Figure 11

tactical nuclear weapons) or units posing a particular threat to friendly forces pursuing other operational objectives.^{xv}

General Starry also saw AirLand doctrine driving the modernization of the Army. In 1983 the Army fielded the M270 Multiple Launch Rocket System (MLRS), featuring the M26 rocket with 150km in range. The MLRS gave the Corps commander an organic weapon to reach the forward edge of his deep fight. Additionally the AH-64 Apache attack helicopter was fielded in 1984. The day-night fighting helicopter's radius spanned 150 km and its hellfire missiles defeated all known enemy armor. The concurrent development of doctrine and supporting technology tremendously enhanced Army capabilities against the Warsaw Pact. AirLand Battle 82 focused Army modernization on developing

systems that increased battlefield capabilities at the operational level of war.

Drawing on to Tukhachevskii's Deep Battle, AirLand Battle 82 made numerous advances over the former FM 100-5 1976.

(1) In AirLand Battle 82, tactical maneuver supported operational fires (deep attack aviation). AirLand Battle 82's relationship of operation fires to ground maneuver was a departure from Deep Battle where operational fires and tactical units supported operational ground maneuver. In AirLand Battle aviation replaced the Deep Battle's ground penetration as the primary operational arm that defeated the enemy.

(2) The focus of the Army Corps on disrupting the enemy echelons 30 to 120 km from the FLOT drastically increased the contact area with the enemy. The AirLand Battle 82's battlefield air interdiction (BAI) was synonymous with the depth of engagement and area of contact Tukhachevskii hoped to achieve. Deep attack aviation in conjunction with using tactical nuclear and chemical munitions maintained continuous pressure on the advancing echelons into the awaiting ground forces.

(3) The construct of AirLand Battle 82 used greater depth and agility to increase friendly lethality, by creating greater attrition on the enemy. Seeking deeper battle equated directly to reducing enemy strength in the close battle.

(4) Continued modernization of the force, increased the Army's organic capabilities to assault the enemy's second echelon. The Army's advancement in capabilities to conduct deep air interdiction allowed the Air Force to push even deeper into the enemy formations and increased the pressure on the enemy.

(5) AirLand Battle does not mention the single battlefield concept; however, the methodology can be assumed, since the Corps head quarters was identified as the bridge between tactical units (Divisions & Brigades) to operational and strategic commanders (Army & Theater levels). The responsibility to link operations to the defeat of the enemy rested with the Corps Commander as well as the operational targeting process. The heavy Division and Corps 86 reformations established forces very similar in capabilities and doctrine to the Soviet Operation Maneuver Groups. The subsequent 1986 revision of AirLand Battle provides the best illustration of the comparison.

Though AirLand Battle 82 emerged from the focus on the Eastern European battlefield, it proved to be significant departure from the 1976 version of FM 100-5. Not only did a balance between the offense and defense return, but the doctrine was also applicable to a far broader spectrum of global conflicts. The doctrine was visionary, shaped the modernization of the force, and empowered leaders to make decisions. AirLand

Battle doctrine was clearly a giant step towards the operational level of war from the 1976 version of FM 100-5.

The 1982 version of 100-5, though a tremendous step forward for the US Army required refinement to reduce ambiguity at the operation a level of war. Additionally the manual came under scrutiny from the NATO allies, and failed to address command and control issues harbored by the Air Force. The 1986 revision of AirLand Battle responded to many of these issues, while retaining the core of AirLand Battle 1982.

AirLand Battle 1986 directly addresses the nature of the operational level of war to operational commanders.

Reduced to essentials, operational art requires the commander to answer three questions: (1) What military condition must be produced in the theater of war or operations to achieve the strategic goal? (2) What sequence of actions is most likely to produce that condition? (3) How should the resources of the force be applied to accomplish that sequence of actions? ^{xvi}

Throughout FM 100-5 1986 tactical and operational levels are clearly delineated pertaining to each primary battlefield function. The majority of operational capabilities reside at the corps and division levels; however, heavier emphasis is placed on the corps due to the more robust intelligence gathering capability. Corps level access to national intelligence platforms extended vision of enemy positions, and battlefield indicators to the boundaries of his area of influence. The capability to detect and access are critical stages in the targeting process, making the Corps headquarters

capable of prosecuting enemy interdiction up to 150 km from the forward line of troops.

The advent of MLRS and the Apache helicopter allowed the Corps headquarters to prosecute enemy interdiction throughout their intended battle space. The Air Force was formerly required to begin battlefield air interdiction (BAI) 20 km beyond the forward line of troops, due the Army's lack of organic fires beyond that range. The dramatic increase in the Army's capability to interdict enemy forces beyond the former fire support coordination line (FSCL), generated Air Force concerns. The Army's ability to attack targets 100 km beyond the forward line of troops (FLOT), allowed Army planners to extend the fire support coordination line deeper into the area of operations. The extension of the fire support coordination line significantly reduced the Air Forces zone for freedom of attack. AirLand 86 reinforced the Army initial stance, of air interdiction creating the conditions of the ground commander's close battle, by establishing the Army Corps headquarters as the central point for coordination in the extended battle space.

The Army, while not relinquishing the operational perspective of judging deep attack by its effect on the close battle, demonstrated a balanced view of the theater responsibilities. General William R. Richardson states in his article FM 100-5: The AirLand Battle in 1986,

The new edition recognizes that future campaigns and major operations will be joint undertakings with mutually supporting air and ground functions. Consequently, those functions-air interdiction, counter-air operations, reconnaissance and ground maneuver-are best directed from the theater, campaign and major operation perspectives. The theater commander must concentrate air power against objectives critical to the successes of the campaign or major operation.^{xvii}

Joint suppression of enemy air defenses (J-SEAD) for example discussed in AirLand Battle 86, addresses the use of Army aviation and artillery assets to support the Theater Air Commander's operation against enemy surface to air defense systems.

AirLand Battle 86 coupled with the Corps and heavy Division 86 enhancements created capabilities very similar to the Soviet Operational Maneuver Groups (OMG). Deep strike/ attack, penetration of enemy defenses, and the exploitation of enemy gaps are common to both US and Soviet doctrine. Conducting deep strike with the OMG, as stated above, focused upon medium depth attacks on enemy command and control, reserves, supply routes, and other supporting agencies. The OMG created a turning movement or cut off tactical forces from critical support. Additionally OMG was also capable of creating a penetration in the enemy defense, or more favorably exploiting a gap created by positional forces. AirLand Battle 86 shares the Soviet perspective of "deep operations" and exploitation.

Deep Operations as defined in FM100-5 86 are "activities directed against enemy forces not in contact designed to influence the conditions in which future close operations will

be conducted."^{xviii} "The concept of interdicting the enemy's supplies, follow-on forces, reserves, and communications to impede his ability to commit these at times and places of his own choosing."^{xix} The ability to conduct such operations requires a deep strike capability coupled with requirement to engage the enemy throughout the battle space. The exploitation force is the critical element to ensure a continuation of initial success. AirLand Battle 86 describes exploitation as an operation "designed to keep the enemy under pressure, compound his disorganization, and erode his will to resist."^{xx} This concept derives directly from Tukhachevskii's Deep Battle theory, which attempted to retain pressure on the enemy and develop operational shock (udar), by denying the enemy's freedom to maneuver. Though, the US Army corps and divisions were never assigned the exclusive mission of exploitation forces, they shared many of the same characteristics.

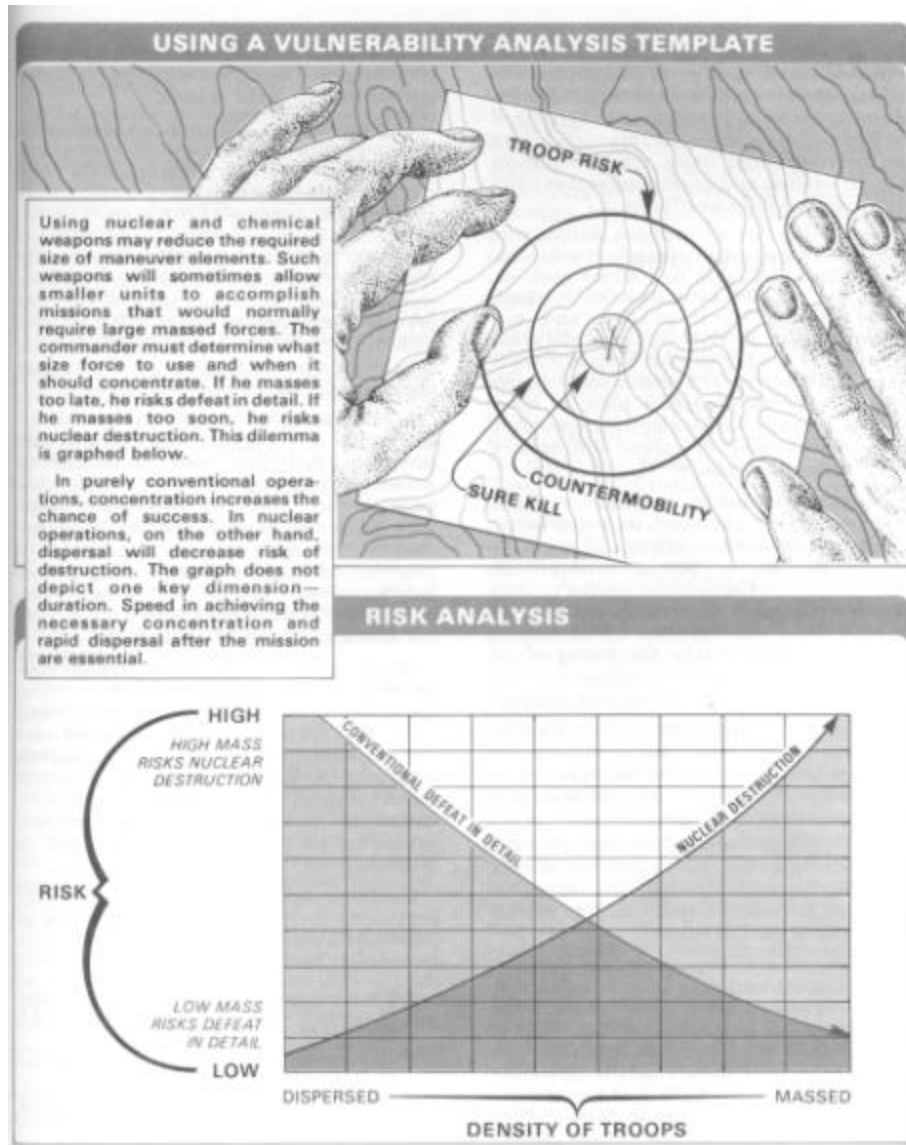


Figure 12

descriptions of the use of both nuclear and chemical weapons disturbed the NATO commanders, who viewed the usage of such weapons on European soil as a last resort (Figure12.)^{xxi}.

AirLand 86 emphasized the US stance prohibiting first use of lethal or incapacitating chemical munitions, additionally all

Both
AirLand Battle
82 doctrine and
Tukhachevskii's
Deep Battle
theory shared
the use of
weapons of mass
destruction as
legitimate
methods to
disrupt the
enemy's
operations
behind the
FLOT. AirLand
82's

diagrams and charts describing the effects of these weapons were omitted.

As with the five elements of concern in Tukhachevskii's Deep Battle theory FM 100-5 1986 AirLand Battle fulfilled all five tents.

(1) Operational fires in aviation, MLRS, and artillery now supported the ground elements operational maneuver and attack.

(2) The simultaneous attack over the battle space disrupted the enemy and created opportunities for attack.

(3) Greater depth increased the maneuver commander's agility and lethality over the enemy.

(4) Increased technology in the development of command and control, weapons systems, reconnaissance, and electronic attack all served to support agility and the increased lethality to the enemy.

(5) The single battle concept emphasized the direct connection of activities throughout the battle space, requiring commanders to increase their areas of interest and anticipate future events.

ⁱ Martin, Laurence NATO and the Defense of the West (Holt,Rinehart, Winston : 1985), 45

ⁱⁱ William S. Lind, "Some Doctrinal Questions for the United States Army" *Military Review* 57, no. 3 (March 1977): 61

ⁱⁱⁱ William S. Lind, "Some Doctrinal Questions for the United States Army" *Military Review* 57, no. 3 (March 1977): 61

^{iv} William S. Lind, "Some Doctrinal Questions for the United States Army" *Military Review* 57, no. 3 (March 1977): 62

^v Air Force Manual (AFM) 1-1 *Functions and the Basic Doctrine of the United States Air Force*. February 1979, 2-13

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- ^{vi} Romjue, John L. *From Active Defense to AirLand Battle: The Development of Army Doctrine 1973-1982*: (U.S. Government Printing Office, 1984), 25
- ^{vii} Robert Leonhard. *The Art of Maneuver*. (Novato: Presidio, 1991), 136
- ^{viii} General Donn A. Starry, USA. "Extending the Battlefield," *Military Review* 61, no. 3 (March 1981), 44, 45
- ^{ix} Romjue, John L. *From Active Defense to AirLand Battle: The Development of Army Doctrine 1973-1982*: (U.S. Government Printing Office, 1984), 25
- ^x "The Doctrinal Renaissance of the U.S. Army. Appendix" URL:
<http://call.army.mil/call/cachist/lav9293/appendix.htm> accessed on 17 February 2001
- ^{xi} Field Manual (FM) 100-5. *Operations* Washington DC: Department of the Army. August 1982, 7-14, 7-15
- ^{xii} Field Manual (FM) 100-5. *Operations* Washington DC: Department of the Army. August 1982, 2-1
- ^{xiii} General Donn A. Starry, USA. "Extending the Battlefield," *Military Review* 61, no. 3 (March 1981), 40, 43
- ^{xiv} General Donn A. Starry, USA. "Extending the Battlefield," *Military Review* 61, no. 3 (March 1981), 41, 42
- ^{xv} "The Doctrinal Renaissance of the U.S. Army. Appendix" URL:
<http://call.army.mil/call/cachist/lav9293/appendix.htm> accessed on 17 February 2001
- ^{xvi} Field Manual (FM) 100-5. *Operations* Washington DC: Department of the Army. (5 May 1986), 19
- ^{xvii} General William R. Richardson USA. "FM 100-5 The AirLand Battle in 1986," *Military Review* 66, no. 3 (March 1986), 6
- ^{xviii} Field Manual (FM) 100-5. *Operations* Washington DC: Department of the Army. 5 May 1986, 19
- ^{xix} Field Manual (FM) 100-5. *Operations* Washington DC: Department of the Army. 5 May 1986, 19
- ^{xx} Field Manual (FM) 100-5. *Operations* Washington DC: Department of the Army. 5 May 1986, 100
- ^{xxi} Field Manual (FM) 100-5. *Operations* Washington DC: Department of the Army. August 1982, 7-9 Joseph L Coffey in his book Arms Control and European Security, also applies NATO's desires to not have the two super powers wage a nuclear war in Europe.

Conclusion

The evolution of the United States Army's AirLand Battle doctrine as it relates to Tukhachevskii's Deep Battle theory illuminates the dynamics under which doctrine was formed during the industrial age. The dynamics that shaped doctrine during that period were: an enemy/ threat, history/ experiences, terrain, politics/ national will, and military capabilities/ technology. Today's information age, where the United States has no peer competitor, introduces a new set of circumstances with regard to the development of doctrine. Circumstances, that may cause a change in the manner future doctrine evolves.

During the early 1970's NATO faced an ominous threat in Eastern Europe. Vastly outnumbered against an armored combined arms threat, the U.S. Army was forced to seek solutions outside of positional attrition warfare. Similarly, the Soviet Union in 1920's through 1930's emerged from World War I and a civil war facing a mechanized combined arms threat in Western Europe. Long casualty stricken battles from both wars, further characterized by the lack of decisiveness, caused Soviet military theorists to seek more effective doctrine to address the enemy threat. Both the US Army in the 1970's and Soviet Union in 1930's were poised against a mechanized, combined arms

capable enemy. They also shared a doctrine emphasizing attrition warfare in lieu of maneuver.

Historically the modern US Army had never been poised against an enemy with such overwhelming size and armor capability. Having no recent or resident experiences to draw upon the Army closely examined the Arab-Israeli wars for answers. General Dupey's 1976 version of FM 100-5, arguably was flawed by his method of validation. Lessons learned from the environment and outcome of the Arab Israeli war were not suitable for a war in Western Europe against the Soviet threat. Conversely Tukhachevskii's Deep Battle was built upon far more resident experiences. The Soviet contributors fought or observed battles in the same environment the doctrine was meant to support. No matter how revolutionary or conceptual Tukhachevskii's doctrine may have been, it was rooted with one foot in the past. A past that is used not only to validate the doctrine but also establish some of the underpinnings. When examining the potential of fighting a mechanized war in Eastern Europe, US Army doctrine improved when it adopted Deep battle; because the doctrine was validated in the same environment.

Terrain and weather shape the manner in which battles may be fought and supported. AirLand Battle assumes the ability to fight in terrain that provides both depth for air attack and ground maneuver. Fighting with NATO in Western Europe limited

the usable terrain for defensive operations; however, AirLand Battle's emphasis on battlefield interdiction and defeating the second echelon, created depth within the same battle space. Tukhachevskii's deep battle spawned in the vast depth of the Soviet Union and maximized the breath of the terrain for operational maneuver. The viability of both doctrines hinged on the ability to attack the enemy in physical depth to disrupt or deny the enemy's ability to respond effectively; thus creating operational shock. The terrain of Europe and the Soviet Union that shaped Tukhachevskii's deep battle had the same effect on AirLand Battle fifty years later. Proving in the span of time that terrain was still an important factor in the shaping of the doctrine.

Political will shapes doctrine by creating the environment for its usage and supplying the resources for its sustainment. The NATO countries concerns regarding chemical and nuclear munitions in Europe directly affected the development of AirLand Battle doctrine. This political condition created more emphasis on creating conventional means of defeating the enemy threat and accelerated the modernization of the Army's long-range weapons systems. Similarly, the political will to modernize the Soviet military in 1930, greatly enhanced the development of both weapons systems and doctrine. Improved tanks, aircraft, and chemical munitions were all supported by

the political will, whose only restriction seemed to be the amount national resources made available for the military. Both AirLand battle and Deep battle were supported and shaped by the political will of the time.

Doctrine is written to address defeating the current enemy and emphasizes current friendly capabilities; however, doctrine also establishes principles that drive modernization of the force. AirLand battle addressed how to defeat the Warsaw Pact in Western Europe utilizing current military capabilities. Modernization of the force was driven to enhance battlefield interdiction, command and control, and target acquisition. The modernization supported the principles of increased operational reach, speed, and lethality. Tukhachevskii's Deep battle focused modernization to achieve the same results. By focusing on aviation, chemical munitions, and tank development, he sought increases in operational reach, speed, and shock. Basing doctrine on operational principles prevents it from becoming quickly outdated and synergizes the modernization effort.

If the threat, history/ experiences, terrain, political will, and military capabilities truly shape doctrine whether it is in 1936 or 1986, then the outcome of future doctrine should be predictable. For the US Military, today's threat is any nation or people that create regional instability. America's experiences in this new era are based on Operation Desert Storm

and Operation Noble Anvil. The terrain is the littorals of the world. The political will, when United States sovereignty is not at stake, emphasizes casualty evasion, limits national resources for the modernization of the force, and requires swift conflict termination. The conditions growing from being the sole super power may produce future doctrine that is more conceptual, due to the inability to directly address issues posed by a single enemy or terrain. A maritime element should be introduced along with a greater reliance on joint service coordination. The doctrine will feature emphasis on coalitions for the sake of creating legitimacy and the reducing the loss of both American casualties and American resources. Emphasis on the application of stand off, precision-guided munitions will increase. The justification for modernization will fail to be validated by operational principles linked to military capabilities, but will be justified by the sentiment to save American lives or maintain capabilities identified in Desert Storm as critical. It may be enough to say that when doctrine attempts to become universal and apply to every enemy in every form of terrain, it will cease to be useful or doctrine as we know it today.

The industrial age brought the characteristics of mass and quantity to the military. The number of tanks, ships, missiles, and planes a nation could marshal for battle formerly quantified

military power. The information age considers stockpiles of weapons cumbersome, senselessly redundant, and wasteful. Doctrine and the size of the military forces are indicative of this paradigm shift. The nature of massive formations and stockpiles of motorized equipment are no longer supported by the political will or the technology of the new era.

The enemy of tomorrow will still possess an independent will, terrain will still shape the manner in which the battles are fought, the environment will still be established by the political will of the people, and the United States must still win. AirLand battle served the Army well in preparing the organization for the war against Iraq. If future doctrine fails to shape the Army in the same manner, then the Army of tomorrow may find itself unprepared for the war of the future.

In the future, doctrine writers must recognize that there are principles of war that are timeless that must not be dismissed from future doctrine. By unlocking Tukhachevskii's deep battle, the US Army recovered many of those timeless principles found at the operational level of war as well as one specific to the environment in Eastern Europe. The timeless principles are: the complementary forms of air and ground maneuver, operational reach, operational fires, operational shock, and offensive initiative. History has proven, that no matter how rudimentary these elements may seem, they are still

perishable and can be forgotten. In the absence of a peer competitor, coupled with the requirement to respond over a wide range of terrain, and even broader scope of political interests, the continued transformation of FM-100 is inevitable. The most recent version of FM-100, Operations 1993, is far more conceptual than the 1986 version. The word "strategic" appears 104 times in the 1986 manual and 233 times in the 1993 version.ⁱ The threat, history/ experiences, terrain, political will, and military capabilities have already begun shaping a future doctrine. The hope is that, future versions of FM 100-5 will be anchored in the timeless principles of the operational art of war. General Depuy said it best during a speech presented to the Infantry Officer's Advanced Course students at the Army Infantry Officers School in October 1989:

People talk a lot about attrition verse maneuver. This is not an intellectual choice. The same Generals who so brilliantly dashed across France were suddenly forced back into conducting attrition warfare. Nobody doubts General George Patton preferred maneuver, but maneuver warfare is not doctrinal choice; it is an earned benefit.ⁱⁱ

ⁱ Maj Michael McCormick, USA. "The New FM 100-5: "A Return to Operational Art," *Military Review* 77, no.5 (Sep-Oct 1997): 5

ⁱⁱ General William Depuy, USA "The Past, the Present, and the Future of AirLand Battle" Remarks delivered to the Army Infantry Officers School in October 1989.

URL: <http://www.geocities.com/Pentagon/Quarters/2116/airlandbattle.htm> accessed 17 February 2001.

**Appendix A: Aviation Tasking from the Red Army's Field Service
Manuel PU-36**

117. Ground attack aviation carries out the following tasks:

(a) Interdiction of the transport and movement of enemy forces to the

Battlefield, and destruction of them at the rear of the operational and

combat zones

(b) direct support of friendly forces by attacking the enemy at various

stages in the battle

(c) disruption of enemy C' (command, control and communications) by destruction of headquarters, signals centers, line systems and radio stations

(d) engagement of enemy air, sea and river "desanty", destroying them at their base en route, on landing or while in action on friendly territory

(e) disruption of the enemy logistic system by interdiction of rail movements, destruction of road-movement routes, and destruction of stores at depots, stations and the like

(f) destruction of enemy aircraft on the ground at its air and the destruction of depots and air bases

(g) participation in defense against mass raids by enemy bomber formations.

II 8. Fighter aviation has as its primary task the destruction of all types of enemy aircraft in the air and on the ground.

Fighter aircraft carry out the following tasks:

- (a) destruction of enemy aircraft in the air and on their airfields
- (b) protection of friendly forces and static installations from enemy air attack
- (c) destruction of observation and barrage balloons
- (d) cover of areas for friendly air formations, and escort within fighter radius of outgoing and returning friendly air formations
- (e) (if necessary) photographic reconnaissance and artillery spotting.

Under special circumstances, fighters may be employed:

- (a) to attack enemy forces in position and on the move
- (b) to fly reconnaissance missions for both ground-force commanders and aviation commanders.

119. Light bombers are deployed against the following types of target:

- (a) troop concentrations
- (b) C³ resources-headquarters and signals centers
- (c) logistic bases

(c) troops movements by road and trail

(e) enemy aircraft on the ground at airfields.

Light bombers may also be given the roles of countering incursions by air forces and support of airborne operations.

Bibliography

Air Force Manual (AFM) 1-1 *Functions and the Basic Doctrine of the United States Air Force*. February 1979

Air Force Manual (AFM) 1-1 *Basic Aerospace Doctrine of the United States Air Force*. 16 March 1984

Air Force Manual (AFM) 1-1 *Basic Aerospace Doctrine of the United States Air Force*. March 1992

Cardwell III, Thomas A. Colonel USAF. *AirLand Combat Alabama*: Air University Press, December 1992

Coffey, Joseph L. *Arms Control and European Security* New York: Praeger, 1977

Cooper, Matthew. *The German Army 1933-1945*. Chelsea: Scarborough House, 1978

Congress of The United States Office of Technology Assessment. *New Technology for NATO: Implementing Follow-on Forces Attack* Washington DC: U.S. Government Printing Office. June 1987.

Davies, W.J.K. *The German Army Handbook 1939-1945*. New York: ARCO Publishing, 1973

"The Doctrinal Renaissance of the U.S. Army. Appendix" URL: <http://call.army.mi./call/cachist/lav9293/appendix.htm> accessed on 17 February 2001

Downing, Wayne A. Colonel USA. "Firepower, Attrition, Maneuver-US Army Operations Doctrine: A Challenge for the 1980s and Beyond," *Military Review*, no. 1 (January 1981): 64-73

Dubik, James M Major USA FM100-5 : "Comparing the Operational Concept and the Defense," *Military Review* 62, no. 12 (December 1982): 13-19

Dubik, James M Major USA FM100-5 : "Conceptual Models and Force Design," *Military Review* 64, no. 7 (July 1984): 16-26

Depuy, William E. General USA "The Past, the Present, and the Future of AirLand Battle" Remarks delivered to the Army Infantry Officers School in October 1989.

URL:

<http://www.geocities.com/Pentagon/Quarters/2116/airlandbattle.htm> accessed 17 February 2001.

Field Manual (FM) 100-5. *Operations* Washington DC: Department of the Army. August 1982.

Field Manual (FM) 100-5. *Operations* Washington DC: Department of the Army. 5 May 1986.

Field Manual (FM) 100-5. *Operations* Washington DC: Department of the Army. 14 June 1993.

Franks, Fredrick M. General USA. "Full-Dimensional Operations: A Doctrine for an Era of Change," *Military Review* 73, no. 12 (December 1993): 5-11

Garthoff, Raymond. *Soviet Military Doctrine*. Glencoe, Illinois: The Free Press, 1953

Glantz, David. *Soviet Military Operational Art in Pursuit of Deep Battle*. London: Frank Cass & Co Ltd, 1991

Glantz, David. *The Soviet Conduct of Tactical Maneuver*. London: Frank Cass & Co Ltd, 1991

Guderian, Heinz *Panzer Leader*. New York: E.P. Dutton, 1952

Hamilton, Robert J. Major USAF. "Green and Blue in the Wild Blue": An Examination of the Evolution of Army and Air Force Air Power Thinking and Doctrine Since the Vietnam War, MSS Thesis. Alabama: School of Advanced Airpower Studies, June 1993.

Isserson, G.S., "The Evolution of the Operational Art," in *Voprosy strategii i operativnogo iskusstva v sovetskikh voennykh trudakh 1917-1940* Moscow:1965

Kokoshin, Andrei A. *Soviet Strategic Thought 1917-91* Cambridge: The MIT Press, 1995

Kagan, Frederick. "Army Doctrine and Modern War: Notes Toward a New Edition of FM 100-5" *Parameters* (Spring 1997):134-151

Laughbaum, Kent. Lieutenant Colonel USAF "Synchronizing Airpower and Firepower in the Deep Battle" Alabama: Air University Press, January 1999

Leonhard, Robert. *The Art of Maneuver*. Novato: Presidio, 1991

Lind, William S. *Maneuver Warfare Handbook*. Boulder: Westview, 1985

Lind, William S. "Some Doctrinal Questions for the United States Army" *Military Review* 57, no. 3 (March 1977): 54-65

Macgregor, Douglas. *Breaking the Phalanx*. London: Praeger, 1997

Marks, James A. Major USA FM100-5 : "OMGs in US Army Doctrine," *Military Review* 69, no.6 (June 1989): 38-42

Martin, Laurence. *NATO and the Defense of the West*. New York: Holt, Rinehart, Winston, 1985

McCormick, Micheal Maj USA. "The New FM 100-5: "A Return to Operational Art," *Military Review* 77, no.5 (Sep-Oct 1997): 3-14

McKercher, B.J.C. and Michael Hennessy. *The Operational Art Developments in the Theories of War*. Westport: Praeger, 1996

Miksche, F.O. *Attack*. New York: Random House, 1942

Naveh, Shimon. *In Pursuit of Military Excellence*. London: Frank Cass & Co Ltd, 1997

Orenstein, Harold. *The Evolution of Soviet Operational Art, 1927-1991*. London: Frank Cass & Co Ltd, 1995

Pickar, Charles. *Blitzkrieg: Operational Art or Tactical Craft?* Leavenworth: School of Advanced Military Studies, 1992

Richardson, William R. General USA. "FM 100-5 The AirLand Battle in 1986," *Military Review* 66, no. 3 (March 1986): 4-12

Romjue, John L. *From Active Defense to AirLand Battle: The Development of Army Doctrine 1973-1982*: U.S. Government Printing Office, 1984

Samuelson, Lennart. *Plans for Stalin's War Machine*. Great Britain: MacMillan Press Ltd, 2000

Shukman, Harold. *Stalin's Generals*. New York: Grove Press, 1993

Simpkin, Richard. *Deep Battle The Brainchild of Marshal Tukhachevskii*. London: Brassey's Defense Publishers, 1987

Simpkin, Richard. *Race to the Swift Thoughts on Twenty-First Century Warfare*. London: Brassey's Defense Publishers, 1985

Starry, Donn A. General USA. "Extending the Battlefield," *Military Review* 61, no. 3 (March 1981): 31-50

Stoecker, Sally. *Forging Stalin's Army, Marshal Tukhachevsky and the Politics of Military Innovation*. Boulder: Westview Press, 1998

Svechin, Aleksandr. *Strategy*. Minneapolis: East View Publications, 1992

Tate, Clyde J. Colonel USA, Holder, L.D. Lieutenant Colonel USA. "New Doctrine for the Defense" *Military Review* 57, no. 3 (March 1977): 2-10

Triandafillov, V.K. *The Nature of the Operations of Modern Armies*. London: Frank Cass & Co Ltd, 1994

Winton, Harold. "Partnership and Tension: The Army and Air Force Between Vietnam and Desert Shield" *Parameters*, (Spring 1996): 100-119